102. The fusion protein of Claim 24 wherein the amino acid sequence of said naturally occurring primate MAdCAM is an amino acid sequence that is at least about 55% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

103. The fusion protein of Claim 24 wherein the amino acid sequence of said naturally occurring primate MAdCAM is an amino acid sequence that is at least about 75% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

104. The fusion protein of Claim 24 wherein the amino acid sequence of said naturally occurring primate MAdCAM is an amino acid sequence that is at least about 90% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

105. The fusion protein of Claim 24 wherein said primate MAdCAM is encoded by SEQ ID NO:1, SEQ ID NO:3 or SEQ ID NO:5 or a nucleic acid that shares at least about 75% nucleotide sequence similarity with SEQ ID NO:1, SEQ ID NO:3 or SEQ ID NO:5.

106. The fusion protein of Claim 24 wherein said primate MAdCAM is encoded by SEQ ID NO:1, SEQ ID NO:3 or SEQ ID NO:5 or a nucleic acid that shares at least about 90% nucleotide sequence similarity with SEQ ID NO:1, SEQ ID NO:3 or SEQ ID NO:5.

107. A fusion protein comprising an $\alpha 4\beta 7$ integrin-binding fragment of primate MAdCAM, wherein the amino acid sequence of said primate MAdCAM is an amino acid sequence that is at least about 55% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

108. The fusion protein of Claim 107 wherein said $\alpha 4\beta 7$ integrin-binding fragment is selected from the group consisting of a fragment comprising the entire extracellular domain of primate MAdCAM and a fragment comprising the two N-terminal immunoglobulin domains of primate MAdCAM, wherein the amino acid sequence of said primate MAdCAM is an amino acid sequence that is at least about 55% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

109. The fusion protein of Claim 107 wherein the amino acid sequence of said primate MAdCAM is an amino acid sequence that is at least about 75% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

110. The fusion protein of Claim 107 wherein the amino acid sequence of said primate MAdCAM is an amino acid sequence that is at least about 90% similar to SEQ ID NO:2, SEQ ID NO:4 or SEQ ID NO:6.

111. A hybrid immunoglobulin comprising a fusion protein of Claim 107.

112. The hybrid immunoglobulin of Claim 111, wherein said hybrid immunoglobulin is a homodimer.

113. A fusion protein comprising human MAdCAM, wherein the amino acid sequence of said human MAdCAM is an amino acid sequence that is at least about 55% similar to SEQ ID NO:2 or SEQ ID NO:4.

114. The fusion protein of Claim 113 wherein the amino acid sequence of said human MAdCAM is an amino acid sequence that is at least about 75% similar to SEQ ID NO:2 or SEQ ID NO:4.

115. The fusion protein of Claim 113 wherein said human MAdCAM is encoded by SEQ ID NO:1, SEQ ID NO:3 or a nucleic acid that shares at least about 75% nucleotide sequence similarity with SEQ ID NO:1 or SEQ ID NO:3.

116. The fusion protein of Claim 113 wherein said human MAdCAM is encoded by SEQ ID NO:1, SEQ ID NO:3 or a nucleic acid that shares at least about 90% nucleotide sequence similarity with SEQ ID NO:1 or SEQ ID NO:3.

117. The fusion protein of Claim 116, comprising a first moiety and a second moiety, wherein said first moiety is a human MAdCAM and said second moiety is at least a portion of a

mutant immunoglobulin chain, said mutant having reduced binding affinity for Fc receptor and/or complement relative to wild type immunoglobulin.

118. A hybrid immunoglobulin comprising a fusion protein of Claim 113.

119. The hybrid immunoglobulin of Claim 118, wherein said hybrid immunoglobulin is a homodimer.

120. A fusion protein comprising an $\alpha 4\beta 7$ integrin-binding fragment of human MAdCAM, wherein the amino acid sequence of said human MAdCAM is an amino acid sequence that is at least about 55% similar to SEQ ID NO:2 or SEQ ID NO:4.

121. The fusion protein of Claim 120, wherein said $\alpha 4\beta 7$ integrin-binding fragment is selected from the group consisting of a fragment comprising the entire extracellular domain of human MAdCAM and a fragment comprising the two N-terminal immunoglobulin domains of human MAdCAM, wherein the amino acid sequence of said human MAdCAM is an amino acid sequence that is at least about 55% similar to SEQ ID NO:2 or SEQ ID NO:4.

122. The fusion protein of Claim 120, wherein the amino acid sequence of said human MAdCAM is an amino acid sequence that is at least about 75% similar to SEQ ID NO:2 or SEQ ID NO:4.

123. The fusion protein of Claim 120, wherein the amino acid sequence of said human MAdCAM is an amino acid sequence that is at least about 90% similar to SEQ ID NO:2 or SEQ ID NO:4.

124. A hybrid immunoglobulin comprising a fusion protein of Claim 120.

125. The hybrid immunoglobulin of Claim 124, wherein said hybrid immunoglobulin is a homodimer.

126. A fusion protein comprising a primate MAdCAM moiety, wherein said primate MAdCAM moiety has binding-affinity for α4β7 integrin and comprises an amino acid sequence selected from the group consisting of SEQ ID NO:2, the amino acid sequence of an α4β7 integrin-binding portion of the polypeptide shown in Figure 1 (SEQ ID NO:2) and an amino acid sequence with at least about 55% sequence similarity to either of the foregoing.

127. The fusion protein of Claim 126 wherein said α4β7 integrin-binding portion is a mature protein.

128. The fusion protein of Claim 126 wherein said α4β7 integrin-binding portion is the complete extracellular domain.

129. The fusion protein of Claim 126 wherein said α4β7 integrin-binding portion consists of the two amino-terminal immunoglobulin domains.

130. The fusion protein of Claim 126 further comprising a second moiety, wherein said second moiety is at least a portion of an immunoglobulin chain.

131. A fusion protein comprising a primate MAdCAM moiety, wherein said primate MAdCAM moiety has binding-affinity for α4β7 integrin and comprises an amino acid sequence selected from the group consisting of SEQ ID NO:4, the amino acid sequence of an α4β7 integrin-binding portion of the polypeptide shown in Figure 1 (SEQ ID NO:4) and an amino acid sequence with at least about 55% sequence similarity to either of the foregoing.

132. The fusion protein of Claim 131 wherein said α4β7 integrin-binding portion is a mature protein.

133. The fusion protein of Claim 131 wherein said α4β7 integrin binding portion consists of the complete extracellular domain.

134. The fusion protein of Claim 131 wherein said $\alpha 4\beta 7$ integrin binding portion is the two amino-terminal immunoglobulin domains.

135. The fusion protein of Claim 131 further comprising a second moiety, wherein said second moiety is at least a portion of an immunoglobulin chain or immunoglobulin chain.---

REMARKS

Claim 27 has been cancelled. Claims 24, 25 and 28 have been amended and Claims 101-135 have been added.

Claims 24 and 25 have been amended to recite naturally occurring primate MAdCAM. Support for the amendment is found throughout the specification, for example, at page 13, lines 3 and 4.

Claim 25 has been further amended to delete "or variant thereof". Claim 28 has also been amended to delete "or variant thereof".

Claim 101 is drawn toward a fusion protein wherein the second moiety is at least a portion of a mutant immunoglobulin chain having reduced binding affinity for Fc receptor and/or complement. Support for the claim is found at page 17, lines 11-18, for example.

Claims 102-135 are drawn toward fusion proteins that contain a MAdCAM moiety that has a specified amino acid sequence. Support for the amino acid sequences recited in the claims can be found throughout the specification, for example in Figures 1-3 and at page 17, line 18 *et seq.* An algorithm suitable for determining % similarity of nucleotide and amino acid sequences is described at page 48, lines 19-31. Support for the MAdCAM moiety being the entire extracellular domain or two N-terminal immunoglobulin domains of a MAdCAM, as recited in Claims 108, 121, 128, 129, 133 and 134, is found at page 16, lines 25-31, Example 3 and Claim 27 as originally filed. Support for the MAdCAM moiety having binding affinity for $\alpha 4\beta 7$ integrin, as recited in Claims 107, 120, 126 and 131, is found at page 13, lines 3-15 and page 14, line 18 *et seq.*

The amended claims and new claims find support in the specification and claims as originally filed. Therefore, this Amendment adds no new matter.

Additional remarks are set forth below with reference to the numbered paragraphs in the Office Action.